

DOCKET FILE COPY ORIGINAL

RECEIVED

FEB 10 1995

February 7, 1995

Office of Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Re:ET Docket No. 94-124
RM-5308
In the matter of
Amendment of Parts 2 and 15
of the Commission's Rules to Permit
Use of Radio Frequencies Above 40 GHz
for New Radio Applications

Dear Secretary

Please find the attached comment of Fujitsu Ten Limited on ET Docket No. 94-124 (one original + nine copies). If you have any questions, please contact me at the following address.

I would like to apologize to be late so much for the NPM comment dates by January 30, 1995. As you know, the January 17 earthquake in the southern part of Hyogo Prefecture caused damage to our company. I hope that you will understand our situation and that you will be generous enough to accept our comment.

Best regards,



IKUJA KUBAYASHI
Managing Director
Vehicle Electronics Division
FUJITSU TEN LTD.
1-2-28 GOSHO-DORI,
HYOGO-KU, KOBE, 652 JAPAN

No. of Copies rec'd
List ABCDE

1 copy

RECEIVED

FEB 10 1995

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the matter of)
)
Amendment of Parts 2 and 15)
of the Commission's Rules to Permit) BT Docket No. 94-124
Use of Radio Frequencies Above 40 GHz) RM-6308
for New Radio Applications)

COMMENTS ON THE NOTICE OF PROPOSED RULE MAKING

Fujitsu Ten Limited is a manufacturer of car electronic devices, such as car audio equipment. Established in 1972, it started developing vehicular radars in 1972 and selling laser radars for collision warning systems in Japan in 1994. The company wants the following addition and change to be made to the NOTICE OF PROPOSED RULEMAKING (FCC 94-273).

Addition and change

1. Addition of an unlicensed 60 to 61 GHz frequency band for vehicular radar bands.
2. The following change to part of the frequency bands assigned as an unlicensed band, in relation to the above addition:
Current draft Proposed draft
59 to 64 GHz 59 to 60 and 61 to 64 GHz

Discussion

1. Major vehicular radar applications currently studied include systems for enhancing safety, collision warning systems, and cruise control systems. To reduce the chances of malfunctions occurring in such applications, it is necessary to provide dedicated frequency bands. By using the propagation characteristic of the 60 GHz band which is an oxygen absorption band, the required radio wave propagation distance could be reduced, thus further reducing malfunctions due to interference.

2. Many Japanese research organizations have been studying the application of millimeter wave radars (50 to 70 GHz) in vehicles since around 1980. Fujitsu Ten Limited has also been researching 50 to 60 GHz applications for a long time. It has rich technological know-how and experience in this field, and is ready to offer reliable vehicular radars that can satisfy the users.

3. In Japan, we plan to use the 60 GHz band in a wide variety of applications such as wireless LANs and broadcasting field pick-up systems, as well as in vehicular radars. As the use of this band spreads to various systems, we expect that the cost of devices using the 60 GHz band will be reduced from economies of scale. The 60 GHz band, for which the MMIC quantity production technology is being established, is suitable to meet the strong demand for low cost vehicular radars.

4. At present, the higher the frequency used in a radar, the more costly the components and materials forming the radar and the measuring instruments required to manufacture. This retards the spread of vehicular radars. On the other hand, the higher the frequency used in a radar, the smaller the required aperture of the antenna. This makes it easier to mount the radar on a vehicle. Therefore, providing the 60 GHz will effectively promote technological development.

5. Using common frequencies in Japan and the USA could enhance efficiency in vehicular radar development. In addition, extended target markets would allow economies of scale by high-volume production, enabling low-cost, reliable vehicular radars to be supplied to the US market.

Respectfully yours,

By :



IKUYA KOBAYASHI

Managing Director

Vehicle Electronics Division

FUJITSU TEN LTD.

1-2-28 GOSHO-DORI,

HYOGO-KU, KOBE, 652 JAPAN

Date: February 7, 1995

RECEIVED

FEB 1 0 1995

Subject : The NPRM comment for ET Docket No. 94-124 RM-8308

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

February 8, 1995

TO : FCC Office of Engineering and Technology
Assistant Chief for Technology
Dr. Marcus
(Fax. 202-632-0199)

Dear Dr. Marcus

Sorry for sending you this letter suddenly.

The January 17 strong earthquake in the southern part of Hyogo Prefecture of JAPAN caused damage to our company . So I delayed upper comment dates. Yesterday, February 7, 1995, to your office of secretary I sent the attached letter and comment signed by our division Managing Director, Mr. Ikuya Kobayashi.

I am very sorry for delay of the comment dates, but I hope that you will understand our situation and that you will be generous enough to accept our comment.

Very respectfully yours,

Keiji Fujimura

Keiji Fujimura

Manager

SECT. 3, R&D DEPT.

Vehicle Electronics Division

PUJITSU TEN LTD.

1-2-28 GOSHO-DORI,

HYOGO-KU, KOBE, 652 JAPAN

Tel. 078-682-2094

Fax. 078-682-2203